

**Office Work Instruction**

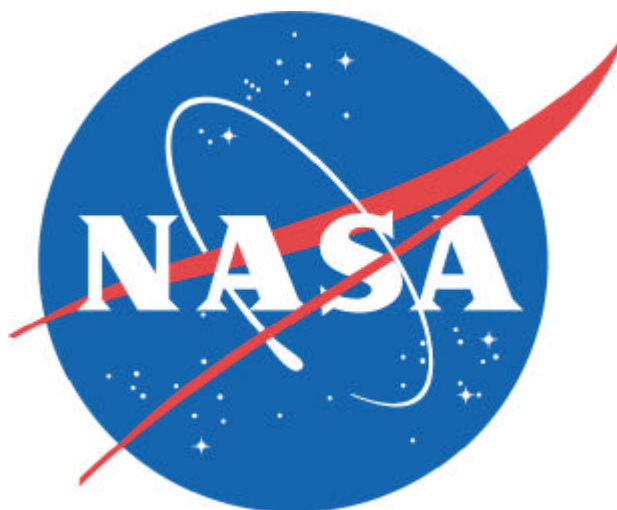
HOWI 8000-U008 REV. C

May 4, 2000

Responsible Office: UM/Space Utilization and Product Development Division

**Subject: Commercial Research Flight Planning**

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**OFFICE WORK INSTRUCTION**

**COMMERCIAL RESEARCH  
FLIGHT PLANNING**

**Original Approved and Signed by:**

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Office of Life and Microgravity Sciences and  
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<b>Status (Baseline/ Revision/ Canceled)</b>	<b>Document Revision</b>	<b>Effective Date</b>	<b>Description</b>
Baseline		02/01/99	
Revision	A	04/30/99	Incorporates changes made in response to comments from the Code U review and the DNV Pre-Assessment Report.
Revision	B	08/17/99	Incorporates changes to eliminate letter version designations and correct titles on reference documents. Adds definition of "Selection Criteria for Commercial Research (Flight). Cross references HOWI 7000 U014 OLMSA Policy Formulation. Updates OWI to recognize oversight role for implementation of selection criteria for commercial research (flight)
Revision	C	05/04/00	Clarify the flow process and responsible parties in the decision process in sections 5 and 6. Eliminates Lead Center Product as a HQ output.

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#### **1. Purpose**

This OWI provides instructions for the activities of the Office of Life and Microgravity Sciences and Applications (OLMSA) personnel in approving and providing accommodations for commercial flight research under the auspices of OLMSA.

#### **2. Scope and Applicability**

This Office Work Instruction (OWI) defines the process for approving and providing accommodations for commercial flight research. It applies to all commercial research developed through Commercial Space Centers (CSCs) or by companies that have a sponsored flight agreement with NASA under the auspices of OLMSA.

#### **3. Definitions**

- 3.1 Human Exploration and Development of Space Enterprise Strategic Plan - A document developed under the direction and authority of the Associate Administrator (AA) of the Office of Life and Microgravity Science and Applications (OLMSA) and Office of Space Flight (OSF) management detailing the goals and objectives of the Human Exploration and Development of Space (HEDS) Enterprise.
- 3.2 Lead Center - NASA Centers are responsible for implementing NASA's programs and projects based on Center mission. Each NASA program is assigned to a Lead Center. Lead Center Directors have full program management responsibility and authority; thus, full accountability for assigned programs including the assignment of work to other Centers. Lead Center Directors delegate management responsibility to program managers who ensure the most expeditious and cost-effective implementation approach for a program. The NASA Marshall Space Flight Center (MSFC) is the Lead Center for Microgravity Research which includes responsibility for Space Product Development activities. The Microgravity Research Office at MSFC is responsible for Program Management.
- 3.3 NASA Strategic Plan - A document defining the goals and objectives of NASA, under the authority of the Administrator.
- 3.4 Office of Life and Microgravity Science and Applications Policy on Review, Selection and Support of Research - A document which defines the policy on how the NASA Office of Life and Microgravity Science and Applications solicits and selects research. This document includes "Selection Criteria (Flight)".
- 3.5 Sponsored Flight Agreement - NASA engages in collaborative activities with industry under the authority of the National Aeronautics and Space Administration Act of 1958, as amended. Collaboration takes a number of forms, including sponsored flight agreements by NASA's Office of Life and Microgravity Sciences and Applications (OLMSA) that may be developed to support commercial research efforts using the environment of space.
- 3.6 Space Product - A commercial product or commercially valuable knowledge derived from the unique properties of space.

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- 3.7 Space Product Development (SPD) Program - OLMSA supports commercially sponsored research to facilitate the use of space for commercial products and services. The principal vehicles for these activities are the Commercial Space Centers (CSC): non-profit entities partnering with industry, university and government organizations, focused on a specific technological or potential commercial market area, and supported by a cooperative agreement and space research opportunities. SPD, one of five major programs of the Office of Life and Microgravity Sciences and Applications, is the responsibility of the Space Utilization and Product Development Division (Code UM) of OLMSA. Program management responsibilities are delegated to the Microgravity Research Office at the Lead Center, Marshall Space Flight Center. Commercial flight research investigations must be sponsored by a commercial entity that is either a member of the CSC or has a sponsored flight agreement with NASA for commercial research.
- 3.8 Space Product Development (SPD) Program Commitment Agreement (PCA) - The PCA is the contract between the NASA Administrator and the OLMSA Associate Administrator that documents the Agency's commitment to execute the program requirements within established constraints.
- 3.9 Safety, human and animal subject research requirements: Activities described in this OWI are conducted in accordance with all NASA policies and requirements relating to safety and research involving human or animal subjects. These policies are stated in: NHB 1700.1 (V1-B), NASA Safety Policy and Requirements Document; NPD 8710.2B, NASA Safety and Health Program Policy; NPD 8910.1, Care and Use of Animals; and, NPD 7100.8A, Protection of Human Research Subjects.
- 3.10 Selection Criteria for Commercial Research (Flight): A document which defines the criteria used to assess a prospective commercial research payload's qualifications for flight sponsorship. The flight activity shall reflect OLMSA's goal to facilitate the use of space for commercial products and services. This document is an attachment to the *OLMSA Policy on Review, Selection and Support of Research* (reference document 4.9).

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### 4. Reference Documents

- 4.1 Marshall Space Flight Center Implementation Plan for Lead Center for Microgravity Research, September 25, 1998
- 4.2 U.S. Partner Utilization Plan
- 4.3 NASA Performance Plan, Fiscal Year 2000 (<http://ifmp.nasa.gov/codeb/library/perform2000.pdf>)
- 4.4 NHB 1700.1, NASA Safety Policy and Requirements Document
- 4.5 NPD 1000.1, NASA Strategic Plan
- 4.6 NPD 7100.8, Protection of Human Research Subjects
- 4.7 NPD 8710.2, NASA Safety and Health Program Policy
- 4.8 NPD 8910.1, Care and Use of Animals
- 4.9 Office of Life and Microgravity Science and Applications Policy on Review, Selection and Support of Research, September 1998
- 4.10 Space Product Development Program Commitment Agreement
- 4.11 HOWI 7000 U014, Office of Life and Microgravity Sciences and Applications (OLMSA) General Policy Formulation Process

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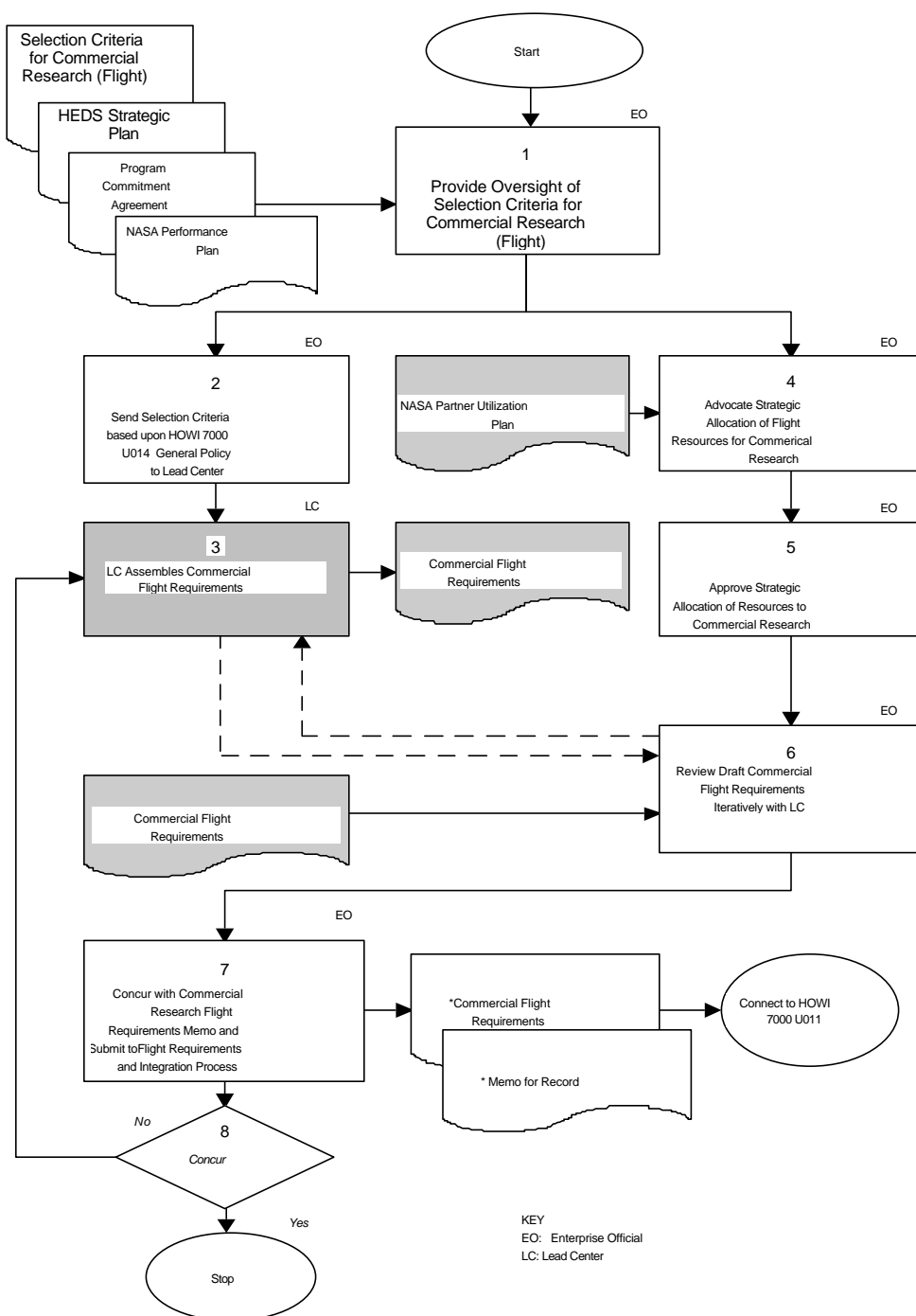
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## 5. Flowchart



Note: Quality Records are Designated by (\*). Shading denotes activity occurring outside of OLMSA.

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### 6. Procedure

The following table describes the process depicted in the flowchart in Section 5. The number at the left of the table corresponds to the numbers in the activity boxes in the flowchart.

#	Responsible Party	Activity Description
1	Enterprise Official (Director, Space Utilization and Product Development Division)	Using selection criteria developed through OLMSA General Policy Formulation, HOWI 7000 U014, provide oversight for implementation of commercial flight selection. In carrying out oversight functions, reference is made to the current HEDS Enterprise Strategic Plan, NASA Performance Plan and the Space Product Development Program Commitment Agreement.
2	Enterprise Official (Director, Space Utilization and Product Development Division)	Send selection criteria generated by HOWI 7000 U014 to Lead Center.
3	Lead Center	The Lead Center assembles and prioritizes commercial flight requirements received from the CSC's and industry (working under NASA sponsored flight agreements). It has reviewed these requirements before sending them to HQ ensuring that safety, human, and animal research requirements will be complied with at the appropriate stages in the flight planning and integration process. The Lead Center coordinates with Headquarters during this activity.
4	Enterprise Official (Director, Space Utilization and Product Development Division)	Advocate strategic allocation of flight resources for commercial research. Provide inputs, as required, to NASA's International Space Station (ISS) planning process. The ISS planning process is an iterative activity involving several NASA research organizations. The products of this process are draft versions of NASA's Partner Utilization Plan (PUP) for the International Space Station. The Final U.S. PUP is approved by the Space Station Utilization Board.
5	Enterprise Official (Associate Administrator)	Approve strategic allocation of flight resources for commercial research. For ISS planning this allocation is included in the NASA PUP otherwise it is reflected in the STS planning process.
6	Enterprise Official (Director, Space Utilization and Product Development Division)	Receive draft flight requirements list from Lead Center. Discuss and iterate list with LC

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|---|--|---|
| 7 | Enterprise Official<br>Director, Space<br>Utilization and<br>Product Development<br>Division | Receive final commercial flight requirements memo from Lead Center; concur and submit to Flight Requirements and Integration Process (See HOWI 7000-U011)   |
| 8 | Enterprise Official<br>Director, Space<br>Utilization and<br>Product Development<br>Division | If the Flight Requirements and Integration Process material is not concurred upon, the process reverts to step 3 and the Lead Center works the issues and concerns raised. If the Flight Requirements and Integration Process material is concurred upon ,the product becomes “Commercial Flight Requirements” and a “Memo for Record” which are an input into HOWI 7000 U011 Flight Requirements Planning and Integration. |



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<i>Record Identification</i>	<i>Owner</i>	<i>Location</i>	<i>Media Electronic/ Hard Copy</i>	<i>Schedule and Item Nos.*</i>	<i>Retention/ Disposition</i>
Memoranda for the Record reflecting Commercial Flight Requirements	Enterprise Official (Lead, SPD)	Code UM	Hard Copy	Schedule 7, Item 4.A	Permanent Retire to FRC when 5 years old. Transfer to NARA when 10 years old.

\* Quality Records are retained in accordance with the referenced schedule and item number from NPG 1441.1, *NASA Records Retention Schedules*